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ABSTRACT

Cyberlearning provides opportunities to many individuals who may not be able to participate in traditional campus-based counselor preparation programs. However, these opportunities will only be fruitful for the students if the online learning experience is of the highest quality. Thus, planning is an essential component of developing a high quality online course. This document discusses a conceptual framework for counselor educators who are considering entering the realm of cyberlearning. Specifically, the framework addresses the issues of pre-planning, course-level planning, and lesson-level planning. In addition, intertwined throughout the document is an example of how this conceptual framework could be applied to an online career development course. (Contains 38 references.) (Author)

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Planning for CyberLearning: A Framework for Counselor Educators

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by
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Chapter Four

Planning for CyberLearning: A Framework for Counselor Educators

Annette C. Albrecht and Dennis G. Jones

> Whether distance learning spells the end of traditional campuses, as some maintain, or whether distance learning instead represents a powerful addition to a growing array of delivery options for higher education, its impact on higher education is great and growing. Distance learning is creating alternative models of teaching and learning, new job descriptions for faculty, and new types of higher education providers. (Eaton, 2002, p. 3)

Clearly, "distance learning poses new challenges for educators" (Serwatka, 2002, p. 46). These challenges may run the gamut from issues related to tenure, issues related to quality, issues related to course design, issues related to testing, and a plethora of other challenges that will continue to emerge as distance learning becomes a more prevalent delivery system within institutions of higher education. Some of these challenges will be similar across academic disciplines, while other challenges will be unique only to the preparation of counselors-in-training. The focus of this chapter is to provide a conceptual framework for counselor educators to utilize in pragmatic planning for the effective development and delivery of online courses.

Need for Planning in an Online Environment

Critics of cyberlearning suggest that students cannot learn in an online environment. A full discussion of the effectiveness of distance learning is beyond the scope of this discussion. However, numerous studies have suggested that "no significant difference" exists in the quality of learning that occurs between distance learning and traditional learning environments (Russell, 1999). Thus, regardless of the delivery method (i.e., online, interactive television, face-to-face, etc.), it is our belief that planning is a key factor in creating high quality learning environments. Other authors

have echoed the importance of planning. For example, Arends (1998) noted, "both theory and common sense suggest that planning for any kind of activity improves results. Research also favors instructional planning over undirected events and activities" (p. 90).

Additionally, in discussing the importance of planning in an online environment, Palloff and Pratt (2001) posited that:

> Nothing takes the place of good planning in the creation of any new academic endeavor. Some institutions have bypassed a planning process in the development of an online program ... However, as with the creation of a single course, planning with the end in mind can only serve to move the institution closer to a realistic use of technology to enhance teaching and learning. (p. 13)

It is our opinion that *planning is an essential component of developing a high quality online course*.

The issue of "quality" distance learning courses has been and will continue to be a concern for faculty and students, but it is also a concern for various accrediting organizations. Mehrotra, Hollister, and McGahey (2001) noted:

> Most colleges and universities in the United States are accredited by one of the country's eight regional accrediting commissions. In addition, specific programs within these institutions are accredited by national professional associations ... Both institutional accreditation and specialized accreditation are voluntary and have two fundamental purposes: quality assurance and institutional program improvement. (p. 195)

For example, "the eight regional accrediting organizations have adopted a common platform for review of distance learning" (Council for Higher Education Accreditation, 2002, p. 7). This platform is based on "a common statement of *Principles of Good Practice in Electronically Offered Academic Degree and Certificate Programs*" (Western Cooperative for Educational Telecommunications, n.d., p. 5).

In addition to the regional accrediting agencies, the 2001 standards of the Council for Accreditation of Counseling and Related Educational Programs (CACREP) stated:

> CACREP recognizes that alternative instruction methods (for example, distance learning) are currently used in many

counselor education programs. The following principles apply when evaluating these programs:

a. Programs that use alternative instruction methods will be evaluated with the same CACREP Standards for accreditation as programs that employ more traditional methods;
b. Accreditation for such programs will be based on their demonstrated compliance with CACREP standards; and
c. Programs that use alternative instruction methods are subject to the same level of review as programs that employ more traditional methods (CACREP, 2000).

In addition to accrediting agencies, professional counseling-related organizations have also developed guidelines concerning distance learning. For example, in May 1999, the Executive Council of the Association for Counselor Education and Supervision (ACES) endorsed a document entitled *ACES Guidelines for Online Instruction in Counselor Education.*

Collectively, the guidelines from regional accrediting organizations, the CACREP, and the ACES provide a basis for a strong foundation for a counselor preparation program when planning for cyberlearning. "Distributed [distance] education will be part of higher education's future. With careful planning, judicious choices, and resolute execution, that future will be a positive one for our institutions, as well as for those we serve" (Oblinger, Barone, & Hawkins, 2001, p. 29).

A Planning Framework for Cyberlearning

Many faculty members develop their teaching style based on the examples and "unexamples" they observed from colleagues as well as from professors during their graduate programs. Many faculty members have implemented certain instructional strategies based on their experiences as graduate students. However, many counselor educators have had limited experiences with cyberlearning as either an instructor or a student. Therefore, they possess no examples and unexamples when developing their own online courses.

The following planning framework has been developed to assist counselor educators to organize the various aspects of developing virtual learning environments for the preparation of counselors-in-training. Planning for cyberlearning occurs at three levels:

1. *Pre-Planning:* This level of planning provides a framework to evaluate the issues that a counselor educator needs to consider prior to deciding whether or not to become involved in cyberlearning.

2. *Course Planning:* This level of planning provides a framework for the steps involved in planning the entire cyberlearning experience (i.e., a full course).
3. *Lesson Planning:* This level of planning provides a framework for the steps involved in planning the individual components (i.e., lessons, units, topics, etc.) that comprise the entire cyberlearning experience.

The remaining pages of this chapter will discuss the three levels of this framework for planning for cyberlearning.

Pre-Planning

Unlike other academic disciplines such as business or English, counselor education has not been quick to embrace cyberlearning. Therefore, counselor educators have few models to serve as examples of how to develop online counseling-related courses. This lack of models as well as a corresponding lack of colleagues to look toward for mentoring makes the pre-planning process even more critical for counselor educators.

Ideally, the pre-planning process should begin at least 12 months prior to offering an online course. For each counselor educator, the issues to be addressed during this process will vary based on the individual as well as his or her academic institution. However, the following schedule delineates some of the issues that a counselor educator needs to consider *prior* to making a commitment to his or her institution to develop an online course.

1. *Belief about the Effectiveness of Cyberlearning:* Does the counselor educator believe that counselors-in-training can *never* learn in an online environment? If yes, then the planning process stops at this point. Online students are no different than students in face-to-face courses in that, if the faculty member does not believe in the learning process, the student has little chance of being successful.
2. *Faculty Incentives:* Many institutions recognize that the processes of developing and delivering online courses are much more time intensive than processes used in traditional face-to-face courses. According to Matthews (2002), "it takes an average of 18 hours of personal time to create one hour of stand-alone Web-based instruction" (p. 9). However, it is our experience that the amount of personal time involved by a faculty member depends on three primary factors: (a) the faculty member's experience in developing online courses (i.e., the second course will not take as long as the first course), (b) the amount of planning that was completed prior to developing the course (i.e., better planning will normally reduce

development time), and (c) the level of support and resources provided to the faculty by the institution (i.e., a greater number of institutional resources will usually mean a lower level of time commitment for the faculty member). For example, a faculty member with prior experience developing online courses that has spent quality time doing the necessary planning and works at an institution that provides high levels of support (e.g., course development support) should find that his or her personal time commitment will be considerably less then the opposite scenario (i.e., first time developer with limited planning, and limited institutional support). Even under the "best case" scenario, it will still take a counselor educator more time to develop and deliver an online course than delivery of the same course in a traditional classroom setting. Therefore, institutions need to find incentives to encourage faculty members to be willing to devote the extra time to developing and delivering online courses. Following is a list of incentives that may be available to faculty members.

a. *Role in Tenure and Promotion Processes:* Does online course development or delivery receive any type of special recognition in the tenure and promotion processes? For example, the Texas A&M University System (2000) has a policy (17.02.02) that includes a statement which would allow system institutions to recognize the development and delivery of online courses in the tenure and promotion processes.
b. *Faculty Training:* Does the institution provide training to help faculty members learn how to develop and deliver online courses? Schrum and Benson (2002) noted, "the strength of the faculty largely determines the success of any program, traditional or online, but in an online distance learning program, faculty development cannot be overemphasized" (p. 197).
c. *Course Development Support:* Does the institution provide support personnel (e.g., course developers) to assist the faculty member in developing the course? The type of support available to a faculty member varies greatly from institution to institution. According to Driscoll (2002), developing web-based courses "requires many team members with specialized skills. In some organizations people play more than one role" (p. 27). The roles that might be needed to support someone in the development of technology-based learning have been identified by Lee and Owens (2000). Our experiences suggest that of the roles identified by Lee and Owens, the following roles seem to be most common at institutions of higher

education which support faculty in the development of online courses:

- *Instructional Designer:* This person works with the faculty member to design the course. This will include determining if graphics, animations, audio, and video are going to be included in the course. If any of these media elements are going to be included, the instructional designer will work with the other members of the course development team to ensure that these elements are accurate and of high technical quality.
- *Graphic Designer:* This person will be essential if the course will include graphics or motion graphics (i.e., animations).
- *Audio Producer or Technician:* This person will be necessary if the course will include audio clips.
- *Video Producer and Video Editor or Technician:* This person will be integral if the course will include video clips (e.g., demonstrations).
- *Author:* For online courses, this person will normally be a web developer and will bring together the final versions of the various media elements (i.e., text, graphics, animations, audio, and video) into a web-enabled environment.

d. *Course Delivery Support:* Does the institution provide support personnel (e.g., a help desk, exam proctors) to assist the faculty member in delivery of the course? Many institutions provide a help desk to support students and faculty with technical problems. During an online course, it is inevitable that one or more students will experience technical difficulties accessing the web-based course materials. Therefore, a help desk is especially important if the counselor educator does not want to be the person to help students resolve their technical difficulties. One of the most difficult logistical issues that a faculty member needs to consider is the issue of testing. If the counselor educator believes that the student should complete pencil and paper-based examinations, then he or she needs to determine how to handle test administration to an online student. Many institutions have developed collaborative relationships with other institutions as well as community colleges for administering face-to-face pencil and paper-based examinations to online students. In a study of student

performance in online courses, Marold, Larsen, and Moreno (2002) reported that the students "took their exams at the College Testing and Assessment Center, where the tests were monitored and a picture ID was required of each student" (p. 184).

e. *Other Incentives:* What additional incentives are available to a faculty member from his or her institution? Schifter (2000) investigated the prevalence of a number of incentives that might be available to faculty members for developing and delivering distance learning courses. Some of the incentives in Schifter's study included:
   - Computer equipment purchase
   - Graduate or Teaching Assistants
   - Internet Service Provider cost covered
   - National conference fees
   - Overload pay
   - Release time
   - Software purchase
   - Travel funds

3. *Intellectual Property:* What are the institution's policies concerning ownership of materials created for online courses? This is a "hot button" for many faculty members because of the concern that a faculty member's institution will take ownership of the course materials created by the faculty member. The National Education Association (2001) reported that "faculty were clearly more concerned about controlling how their intellectual property was used than the amount of money they might get for that property" (p.4). According to Tallman (2000):

   Copyright law provides, in general, that works created by employees within the scope of employment belong to the employer. That provision has particular relevance to the creation and delivery of online courses at a university. A university may claim that online courses are created within the scope of a faculty member's employment, and that, therefore the university owns them. There are reasonable grounds for a university to claim such ownership. There are also reasonable bases for faculty to claim ownership. It may be possible to avoid contention if the parties agree to own copyright of online courses jointly. (p. 212)

4. *Library Readiness:* Is the institution's library prepared to support the research needs of the online students? Coffman (2001) observed "it's not easy to walk over to the library after class when your university

is a thousand miles away. Unfortunately, however, advances in distance librarianship have not always kept pace with the rapid development in distance education" (p. 22).

5. *Readiness of Other Support Services:* Are other support services (e.g., financial aid, book store) prepared to respond to the needs of online students? Even though these services may not be directly related to the academic content, the quality and availability of these services have the potential to impact the learning experiences for online students. Buchanan (2002) noted:

   Significant institutional structures, including such areas as registration, advising, library, and technical support are overlooked until too late. Institutions must have clear, well-planned strategies in place in order to maximize their students' learning experiences and overall satisfaction with distance education. (p. 141)

After considering these and other issues, the counselor educator should be able to decide whether or not he or she is willing to make a commitment to his or her institution to develop an online course. If the decision is yes, the counselor educator then needs to develop a timeline for preparing a course. The faculty member's distance learning staff may have a recommended timeline. If not, various authors (Albrecht & Jones, 2001; Smith, 1998) have suggested timelines for developing online courses. Two of the key components in the timeline should address course-level planning and lesson-level planning. The remainder of this chapter provides frameworks for these two planning activities.

Course Planning

Once the counselor educator has decided to further explore the opportunities of cyberlearning, the next major task involves selecting a course for conversion to online delivery. This decision may rest with the individual counselor educator or this could be a decision made by the counselor preparation faculty. After the course has been selected, the planning process needs to focus on issues related to the conversion of this specific course.

On many campuses, the first steps in course planning will involve initiating some type of paperwork through the department chair or the campus distance learning administrator. This paperwork often will provide the faculty member with institution-specific procedures and deadlines for developing the course, as well as the process for receiving various approvals. After the approvals are received, the course planning process can begin.

Various authors (e.g., Dick & Carey, 1996; Harris & Castillo, 2002; Shade 2000; Smith & Ragan, 1999) have suggested models for course planning. Each of these models possesses its own nuance, however collectively they contain "the following requisite elements:

1. Analysis of the Learning Environment
2. Establishment of Course Goals
3. Selection of Instructional Delivery System(s)
4. Methods of Student Assessment
5. Evaluation of the Learning Process" (Albrecht & Jones, 2001, p. 37)

The following discussion describes the possible use of this course planning model by a counselor educator in the development of an online course in the area of career development. The exact nature of career development-related courses will differ from institution to institution. Therefore, we have selected a more general description using the career development core area of the CACREP's (2000) document entitled *The 2001 Standards*. This description will provide the basis for applying the course planning model to an online course in the area of career development.

1. *Analysis of the Learning Environment:* This step in the course planning process concerns the background of the learner as well as the context in which the learning is going to occur. Lee and Owens (2000) identified nine types of analysis that should occur during this phase of the planning process. However, the following three types of analysis would have the most impact on the development of an online counseling-related course.
    a. *Audience Analysis:* "Identify the background, learning characteristics, and prerequisite skills of the audience" (Lee & Owens, 2000, p. 14). The background factors could include gender, age, and native language (i.e., in an online course the student could reside anywhere in the world). The learning characteristics could include learning styles and preferences, as well as motivations related to the course. Finally, the prerequisite skills would focus on prior counseling-related courses, writing skills, and research abilities.
    b. *Technology Analysis:* "Identify existing technology capabilities" (Lee & Owens, 2000, p. 14). This would include verifying the technological options available to the instructor for use in the course. For example, does the institution have the ability to provide real-time audio and video streaming over the Internet

to students? However, the more important component of this part of the analysis concerns assessing the technological capabilities of the instructor and the students. For example, do the students have experience in other online courses?

c. *Situational Analysis:* "Identify environmental or organizational constraints that may have an impact on goals and multimedia design" (Lee & Owens, 2000, p. 14). These factors could include a variety of issues, many of which the counselor educator will most likely have little power to control or influence. However, each of these issues will impact how the faculty member ultimately designs the course. For example, these constraints could include having an institutional policy that students cannot be required to attend a mandatory on-campus orientation at the beginning of the online course.

Application to an Online Career Development Course: In the situation of the career development course, we are going to assume that the students have already completed an introductory counseling course in a "hybrid" format (i.e., an online course with monthly face-to-face class meetings). Therefore, the students possess some understanding of the role of career development in the counseling process as well as some technical skills. The faculty member has never taught an online course, but has taught several other courses using the hybrid format described above.

2. *Establishment of Course Goals:* This step in the course planning process concerns articulating the goals that the faculty member expects the students to achieve as a result of the course. Various authors (e.g., Bloom, Engelhart, Furst, Hill, & Krathwohl, 1956; Gagne, Briggs, & Wager, 1992; Marzano, 2001) have identified taxonomies to assist instructors in delineating educational goals and objectives. At many institutions, the distance learning departments will have a preferred approach for writing course goals. The following discussion of course goals is based on the work of Marzano who described a "new" taxonomy that, like Bloom's Taxonomy, articulates six levels of mental processing:

Level 6: Self-system thinking
Level 5: Metacognition
Level 4: Knowledge utilization
Level 3: Analysis
Level 2: Comprehension
Level l: Retrieval

> Although somewhat similar to Bloom's Taxonomy on the surface, there are some profound differences. For example, the six levels of Bloom's Taxonomy do not address self-system thinking and metacognition as described in the New Taxonomy. Thus, one can argue that Bloom's Taxonomy is included in the first four levels of the New Taxonomy. Another major distinction between this work and Bloom's Taxonomy is that the New Taxonomy describes three domains of knowledge-the domain of information, the domain of mental procedures, and the domain of psychomotor procedures-which cut across all six levels of mental processing. This is in sharp contrast to Bloom's Taxonomy, which restricted its discussion of the various types of knowledge to the first level only - aptly named the "knowledge" level. (Marzano, pp. viii-ix)

Application to an Online Career Development Course: Academic courses generally focus their goals primarily in the domain of information and secondarily in the domain of mental procedures. In fact, it could be argued that, in some academic disciplines (e.g., math, life sciences) most of the educational goals would be from the domain of information. However, counselor preparation programs tend to expect that in addition to developing a strong understanding of counseling-related theories and practice (i.e., the domain of information), the counselors-in-training will also develop their abilities in both the domain of mental procedures and the domain of psychomotor procedures. Using the "Career Development" section of *The 2001 Standards* (CACREP, 2000) as a guide, course goals for an online career development course could incorporate learning from all three domains. In the domain of information, a course goal could be for the student to be able to compare and contrast the major theories of career counseling and development (Analysis level). Additionally, in the domain of mental procedures, a course goal could be for the student to be able to explain the process used in selecting appropriate career-related assessment tools when given a client's background (Comprehension level). Finally, in the domain of psychomotor procedures, a course goal could be for the student to be able to demonstrate a proper method of interpreting results from career-related assessment instruments (Retrieval level).

3. *Selection of Instructional Delivery System(s):*
   In a distance learning environment, the decision concerning instructional delivery systems should be based primarily on the first and second parts of the course planning process (i.e., the learning environment and the course goals). An additional factor that many

faculty members consider during this part of the course planning process concerns their preferred teaching methods.

Given that the focus of this chapter is online courses, the discussion of instructional delivery systems will be limited to those systems that could be used in conjunction with an online course. These tools can be divided into two areas: (a) tools for providing content, and (b) tools for providing interaction.

a. *Tools for Providing Content*: The most common method of providing remote students access to course content is through printed materials (e.g., textbooks, articles) and web pages (e.g., lecture notes, diagrams, articles). Other methods for providing content to these students could include video and audiotapes as well as optical computer disks (e.g., CD-ROM, DVD). A final method could be to have the students attend face-to-face meetings at the institution or a centralized location.

b. *Tools for Providing Interaction*: The most common methods of providing interaction (i.e., student-teacher and student-student) for remote students are: (a) electronic mail, (b) electronic bulletin boards for threaded asynchronous discussions, and (c) electronic text-based chat for synchronous discussions. These tools could stand alone or be incorporated into some type of web-based course management system (e.g., WebCT, Blackboard). Additional tools that could be used for interaction include computer-based conferencing (e.g., audio and video, or audio only) and telephone-based audio conferencing. A final method could be to have the students attend face-to-face meetings at the institution or a centralized location.

   Even though the concept of face-to-face meetings was presented in the context of being a possible tool for providing content and interaction, it is our belief that face-to-face meetings should only be included to achieve specific course-related objectives that could not be achieved using any other available tool.

Application to an Online Career Development Course: Given the students' backgrounds and the sample of course goals described previously as well as the instructor's reflective approach to the teaching and learning process, this sample course will utilize print-based and web-based materials as the primary learning resources. The secondary learning resource will be an instructor-produced (with the help of the institution) videotape of demonstrative counseling sessions that focus on career development-related

issues. Additionally, the course will employ electronic mail and electronic bulletin boards for threaded asynchronous discussions. All of the course goals can be achieved using these tools; therefore no face-to-face meetings will be required for the students in this course.

4. *Methods of Student Assessment:* According to Lynch (2002):

> Teachers have been evaluating students since formal education began. Student mastery may be assessed through a variety of methods, including oral interviews, written tests, practical application of concepts and procedures, and asking students to teach the concept or skill to someone else. Unfortunately, both in traditional education and in Web-based education, student evaluation is often given short shrift when designing instruction. Usually this misconnection in evaluation occurs because teachers or course designers fail to create a direct relationship between instructional objectives and assessment measures. To establish this connection three key ideas are crucial:
>
> - Obtain a good match between the type of objectives you wish to measure (e.g., knowledge, skills, attitudes) and the means you use to measure it.
> - Use several data sources to gain as complete a picture as possible.
> - Remember that not all instructional objectives lend themselves to direct, precise measurement. (p. 118)
>
> In addition to the assessment techniques used in face-to-face classrooms, most of which can either be used directly or adapted to a web-based environment, the electronic environment allows some additional tools. For example, many faculty members include in their course assessment methodology a component related to the quality of the postings on the course's electronic bulletin board. Other instructors will utilize "timed" online objective item quizzes that are automatically graded by the electronic testing software. The assessment techniques selected by the instructor should be based on the course goals.

Application to an Online Career Development Course: Given the sample of course goals presented previously, the following applies techniques that could be utilized to measure each of these goals.

- The student will be able to compare and contrast the major theories of career counseling and development (Domain of Information at the Analysis level). This goal could be assessed by having students respond to discussion prompts on a bulletin board. This would allow students to share differing perceptions concerning the major theories.

- The student will be able to explain the process used in selecting appropriate career-related assessment tools when given a client's background (Domain of Mental Procedures at the Comprehension level). This goal could be assessed by having students respond to an essay question on a proctored exam.
- The student will be able to demonstrate a proper method of interpreting results from career-related assessment instruments (Domain of Psychomotor Procedures at the Retrieval level). This goal could be assessed by having students produce videotapes of themselves role-playing these methods.

5. *Evaluation of the Learning Process:* One way of evaluating the learning process in an online environment has been suggested by Beer (2000). Specifically, Beer noted:
   In addition to testing your learners to ensure that they got the skills they needed, you also may want to evaluate your Web learning environment itself. If tests show that your learners did not get the skills they needed, it may not be the learners that need help. Perhaps they had trouble with the technology. (p. 130)

Additionally, Rosenberg (2001) reported, "The typical end-of-course evaluation, or rating sheet, is perhaps even more important for e-learning than in the classroom. With a classroom event, it is possible to observe students' reactions" (p. 220). However, the ability to directly observe students is lost in a web-based environment. Thus, the end-of-course evaluation provides an essential method of receiving feedback. Additionally, many web-based course management systems allow faculty members to design simple anonymous feedback forms that can be used as formative course evaluation tools throughout the semester. One of the current authors includes in his course a writing assignment at the end of the semester that requires the students to reflect on the course content, the assignment and activities, as well as the instructional delivery system(s). The information derived from this assignment is used to improve the course during subsequent semesters.

Application to an Online Career Development Course: Given that in this scenario this is the counselor educator's first online course, the formative evaluations would be critical to allow the faculty member to make any necessary mid-course corrections during the semester. Additionally, even with the unreliability of some end-of-course evaluation instruments, if the items on the end-of-course evaluation are similar in nature to the items on a face-to-face course evaluation, it may be possible for a faculty member to make some meaningful comparisons.

After completing the initial course plan, the counselor educator should then change the focus to planning of the individual lessons (i.e., topics, units, etc.) that will be included in the course. The final section of this chapter describes the lesson planning process and application of this process to an online career development course.

Lesson Planning

In discussing the concept of a "lesson" in a web-based online course, Horton (2000) suggested that:

> A lesson is a collection of activities and presentations that accomplish one of the sub-goals of the course. Each lesson is larger than an individual page and smaller than the whole course. ...In many ways, a lesson is a miniature course requiring its own objectives, introduction, assessments, and feedback. (p. 136)

Therefore, the first task is to divide the course into lessons. After the course is divided, the planning process for each lesson is ready to begin.

Various authors (e.g., Arends, 1997; Gagne et al., 1992) have created lesson planning models for face-to-face courses that can be applied to online courses. The salient elements of these models that have application to online course development have been suggested by Albrecht and Jones (2001) to include:

1. "Analysis of Learner Readiness
2. Identification of Instructional Objectives
3. Selection of Instructional Techniques and Resources
4. Assessment of Student Learning
5. Evaluation of the Learning Process" (p. 38)

The following discussion describes the possible use of this lesson planning model by a counselor educator in the development of one lesson within an online course in the area of career development. The specific lesson to be addressed in this example concerns the topic of major theories of career counseling and development.

1. *Analysis of Learner Readiness:* This type of analysis determines how the students will relate to the content of the individual lesson. Herring and Smaldino (1998) posited factors to consider at this step of the process concerning the learner:
   a. *Prerequisite Skills:* Does the student possess the necessary skills (e.g., technology, writing, research) to be successful in completing the lesson? For example, based on the content of a particular lesson, certain technological skills may be required

when reviewing materials on a CD-ROM that accompanied the textbook.

b. *Prior Experience with the Cognitive Tasks:* Does the student have prior experience with the topic of the particular lesson? For example, in a unit discussing a particular statistical technique, does the student understand the concepts of mean and standard deviation?

   In situations where students are less prepared for the scope of a particular lesson, the instructor should plan to provide the student with more:

   - Learning resources (e.g., print-based, web-based)
   - Structure in the design of the web-based activities
   - Time to reflect on the topic

Application to an Online Career Development Course: Given that in this scenario the lesson will address the major theories of career counseling and development, it will be important to address both the prerequisite skills and prior experience with the cognitive tasks. In reference to prerequisite skills, the skills for this lesson would be similar to the skills for other lessons in this course. In reference to prior experiences, as indicated earlier, the students have already completed an introductory counseling course. Therefore, they have been exposed to the concept of a counseling theory and should recognize the names of some of the major theorists in career counseling and development.

2. *Identification of Instructional Objectives:* Unlike course goals, which tend to be general statements of learning outcomes, instructional objectives delineate, with greater specificity, exactly what students "should be able to do when they complete a segment of instruction" (Smith & Ragan, 1999, p. 84). However, like course goals, instructional objectives can be developed in the context of the previously discussed "New Taxonomy" of educational objectives suggested by Marzano (2001).

Application to an Online Career Development Course: Given that in this scenario the lesson will address the major theories of career counseling and development, the instructional objectives for this topic would probably focus on the domain of information. Specifically, the objectives could include:

a. Describe the key components of each of the major theories of career counseling and development. (Retrieval level).

b. Describe the relationship between the key components of Roe's theory and Holland's theory. (Comprehension level)
c. Describe how Super's theory is similar to and different from Tiedemann's theory. (Analysis level)
d. Determine which of the career counseling and development theories would be most appropriate to apply to a given situation and explain the criteria used to select among the theories. (Knowledge Utilization level)
e. Describe a goal you have or might have relative to your understanding of career counseling and development theories and identify what you would have to do to accomplish this goal. (Metacognition level)
f. Describe to what extent you believe you can improve your understanding of career counseling and development theories and identify the reasoning behind this belief as well as the reasonableness of your thinking. (Self-System Thinking level).

Based on our experiences, the first four instructional objectives are fairly common in career development courses, where as the final two objectives may not be as commonplace.

3. *Selection of Instructional Techniques and Resources:* Within the context of the students' readiness for the topic, this step in the lesson planning process concerns identifying the most appropriate tools and activities to help the students achieve the specific instructional objectives. The tool component of this selection process concerns the types of learning resources that will be available to the student. The techniques component of this selection process addresses the types of activities that the student will be expected to complete related to the topic. These are the same types of decisions that instructors make in a face-to-face environment.

Application to an Online Career Development Course: Given the previous description of the students' levels of readiness for the topic of career counseling and development theories, and limiting the lesson to the first four instructional objectives listed above, the counselor educator would need to select the most appropriate resources and activities. For example, in the area of resources, the students could be expected to read the chapter(s) in the course textbook(s) related to career counseling and development theories. Additionally, the course web pages could provide the students with several hyperlinks to career counseling and development theories. Finally, the counselor educator could include on the course web site his or

her personal insights (e.g., examples) relative to career counseling and development theories. In the area of activities, the counselor educator may want to identify activities related to each of the specific objectives. To elucidate, for the instructional objective to determine which of the career counseling and development theories would be most appropriate to apply to a given situation and explain the criteria used to select among the theories, the counselor educator could post a case study to the web site and have students respond to a bulletin board topic on this case study. This activity would allow the students to articulate their own perceptions while garnering an understanding of the perceptions of their classmates concerning the various theories. Furthermore, based on the students' asynchronous discussion, the instructor can respond throughout this activity to provide clarifications or expound on the career counseling and development theories.

4. *Assessment of Student Learning:* At the lesson-level, assessment may be either informal or formal. Informal assessments can be either formative or summative.

   An informal formative assessment could be built into the lesson's web site using the following technique. The instructor could include an objective type question at the end of each page of web-based material that contains two possible responses. Each response would be represented as hyperlinked text. If the student selects the correct response, the hyperlink would direct the student to another web page containing material concerning the next topic. However, if the student selects the incorrect response, the hyperlink would direct the student to a page containing additional material on the same topic. This informal formative assessment process provides an example of scaffolding. "A scaffolding structure provides additional opportunities (e.g., examples, explanations) for those students who need them, but does not require all students to complete the additional learning opportunities" (Albrecht & Jones, 2001, p. 123).

   An informal summative assessment could include an end-of-lesson web-based quiz that is automatically scored by the computer, but the results are not reported to the instructor. This quiz could be designed to incorporate feedback to the student concerning each response (e.g., your response was correct because ..., your response was incorrect because ...).

   Formal assessments at the lesson level are usually summative and can take many forms based on the instructional objectives that the faculty member hopes to achieve within the given lesson. The faculty member could require the students to complete a web-based quiz

that is timed (i.e., limits their ability to "look up" answers) and not scored until all students have completed the quiz.

Additionally, the instructor could assess the students' contributions to the discussion board activities. Bauer and Anderson (2000) demarcated "an online assessment rubric that will help professors evaluate both formal writing and informal written discussions. In particular we focus on three major aspects of writing: *content, expression,* and *participation*" (p. 66). Using this rubric framework, or a similar type of tool, would be a technique to formally assess discussion board activities.

Application to an Online Career Development Course: Given the previous description of the resources and activities, and limiting the lesson to the first four instructional objectives listed earlier, the counselor educator would need to select the most appropriate assessment activities for this lesson. For example, in the area of informal assessment, the counselor educator could use web-based quizzes that assess the students' understanding of the career counseling and development theories. The faculty member could also use the rubric posited by Bauer and Anderson (2000) to conduct a formal assessment of the students' postings to the discussion board concerning the case study.

5. *Evaluation of the Learning Process:* Evaluation of the learning process at the lesson-level tends to be less formal than the end-of-semester course evaluations. Lesson-level evaluation may take the form of a simple web-based anonymous survey that requests student feedback concerning the clarity of the learning resources included in the lesson, perceived effectiveness of the activities to contribute to an understanding of the concepts, and the usefulness of the feedback received from the instructor. The faculty member can use the information from this survey for a twofold purpose: to adjust this lesson the next time that the course is delivered in an online format, and to adjust future lessons in the current course.

Application to an Online Career Development Course: Given the previous description of the assessment strategies, and again limiting the lesson to the first four instructional objectives listed, the counselor educator would need to develop formative techniques for receiving feedback concerning the learning process. For example, a simple web-based survey could elicit feedback pertaining to students' opinions concerning the textbook chapters for this topic, the web-based resources, and the discussion board based case study.

Conclusion

This chapter has discussed a conceptual framework for counselor educators who are considering entering the realm of cyberlearning. Specifically, the framework addressed the issues of pre-planning, course-level planning, and lesson-level planning. In addition, intertwined throughout the chapter was an example of how this conceptual framework could be applied to an online career development course.

Cyberlearning provides opportunities to many individuals who may not be able to participate in traditional campus-based counselor preparation programs. However, these opportunities will only be fruitful for the students if the online learning experience is of the highest quality. Thus, it is our belief that *planning is an essential component of developing a high quality online course*. In discussing the importance of planning in a distance learning environment, Herring and Smaldino (1998) stated the need for faculty members to "prepare, prepare, prepare, and prepare some more" (p. 19).

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